

**REMARKS**

In response to the Office Action dated August 17, 2006, Applicants have amended claims 1-19. Claims 20-30 have been added corresponding with previous dependent claims 3-5 and 11-18, but depending on claim 2 rather than claim 1. Reconsideration of the rejections and objections set forth in the Office Action, is respectfully requested. Applicants submit that the claims are in condition for allowance.

***Claim Rejections - 35 U.S.C. § 112***

The Examiner has rejected Claims 1-19 under 35 U.S.C. § 112, second paragraph for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims have been amended to more clearly indicate the subject matter of the claims and remove the reference numerals from the claims.

Regarding claims 1 and 2, amendments have been added to correct lay out the steps involved in the process. Additionally, claims 1 and 2 have been amended to has been amended correctly remove unclear terms and provide proper antecedence.. Claims 6, 19, 7, 8, 11, and 13 have been amended to more clearly identify the subject matter and provide proper antecedence. Claim 16 has been amended to clearly identify the steps as in claim 1.

In light of these amendments and arguments, Applicant has overcome the Examiner's 35 U.S.C. §112 rejections. Thus, the Examiner is respectfully requested to withdraw these rejections with respect to Claims 1-19.

***Claim Rejections - 35 U.S.C. § 102***

The Examiner has rejected Claims 2, 6 under 35 U.S.C. § 102 as being anticipated by Stifano (US 4,291,568). The Examiner has rejected claims 1-3 and 6 under U.S.C. § 102 as being anticipated by Oakley (US 4,291,568).

However, independent claims 1 and 2 have been amended to indicate that the metal pieces forged have a “diameter greater than 30 mm.” Additionally, the claims have been amended to indicate that the presses are hydraulic presses. These two limitations are found nowhere in the cited references.

It is almost impossible to extrude or forge metal pieces having a diameter greater than 30 mm (1.18 inches) by means of mechanical multipresses. A mechanical multipress is certainly faster than a hydraulic press and allows a higher productivity to be achieved. However, mechanical multipresses are never used for extruding or forging metal pieces having a diameter greater than 30 mm (1.18 inches) owing to a plurality of technical reasons. First, the speed of the mechanical press makes it operatively impossible to keep the distribution of forces under control during the process, what results in the pieces and the tools being widely overheated. By way of example, when extruding by a length of 45 mm (1.77 inches) a steel piece having a diameter of 50 mm (1.97 inches) through a 500 tons mechanical press at a speed of 500 mm/sec (19.7 inches/sec), at the contact spot between extrusion punch and metal piece a temperature of about 400-450°C (752-842°F) may be gauged. After 50 to 70 worked pieces such temperature climbs up to 560°C (1040°F), which is the recovery temperature of the superfast steel that is used in these applications, and this means that the punch cannot be used anymore. Owing to this fact, while mechanical multipresses are normally used for obtaining small pieces, i.e. pieces having a diameter under 30 mm (1.18 inches), larger pieces are always manufactured through hot forging processes or, in many cases, through turning and/or milling processes.

Now, turning to the references cited by the examiner, it may easily be found that Stifano relates to cold forging processes of relatively small pieces, i.e. having a diameter that is certainly under 30 mm. In particular, socket wrenches as those manufactured through the process of Stifano are very small steel pieces, suitable for being worked by means of a mechanical multipress. On the other hand, the pieces manufactured by the cold heading machine of Oakley are valve stems whose diameter which never exceed 12-15 mm (0.47-0.59 inches).

Mechanical presses and hydraulic presses have very different fields of application and may not be replaced with one another, just depending on the designer's choice. In this respect, for instance, it is no way likely that the presses used in Stifano are hydraulic presses, because the

socket wrenches of Stifano are very small pieces manufactured through a mass-production method that requires relatively small forces and relatively high speeds. On the other hand, hydraulic presses are normally characterized by higher pressing forces, much lower speed and, consequently, much lower output.

In the particular field of manufacturing bushings, nuts, screws and similar products, cold forging with mechanical presses was used under diameters of 30 mm (1.18 inches), while for manufacturing larger products the technique of cold forging through mechanical presses was **not** used, because of the overheating occurring to the punching tools. It was commonly believed that the temperature increase is exponential in respect of the increase of the diameter of the piece to be worked, and this excluded the use of cold forging processes for obtaining pieces having a diameter over 30 mm (1.18 inches).

Hence, in the absence of any teaching or suggestion as presently claimed, in the Stifano or Oakley reference, anticipation of the present claims is negated. Thus the Applicants respectfully request that the Examiner withdraw the 35 U.S.C. 102 (b) rejections to claims 1-3 and 6.

***Claim Rejections - 35 U.S.C. § 103***

The Examiner has rejected Claims 7 under 35 U.S.C. § 103 as being unpatentable by Stifano, and 8-10 and 19 in view of Stifano in view of Green (US 5,632,175). The Examiner has rejected claims 7, 11, 13-18 under U.S.C. § 102 as being unpatentable by Oakley, as well as 8-10 and 19 in view of Stifano in view of Green, and claim 12 by Oakley in view of Ware (US 2,689,360).

With reference to the above arguments, no where in these reference is there cited any mention of the metal pieces having a “diameter greater than 30 mm.” Additionally, the claims have been amended to indicate that the presses are hydraulic presses. Thus the Applicants respectfully request that the Examiner withdraw the 35 U.S.C. 103 rejections to claims 7-19.

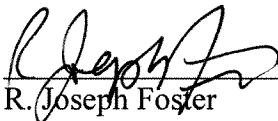
*Conclusion*

Applicants have complied with all requirements made in the above referenced communication. Applicants submit that the present application is in condition for allowance, and therefore, respectfully request that a timely Notice of Allowance be issued in this case. Should matters remain, which the Examiner believes could be resolved in a telephone interview, the Examiner is requested to telephone the Applicants' undersigned agent.

The Director is authorized to charge any additional fee(s) or any underpayment of fee(s), or to credit any overpayments to Deposit Account Number **50-2638**. Please ensure that Attorney Docket Number 58009-018400 is referred to when charging any payments or credits for this case.

Respectfully submitted,

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